

### The production of bio-diesel



At the bio-diesel plant KVG Kartoffelverwertungsgesellschaft Cordes & Stoltenburg GmbH & Co. in Schleswig the reconstruction concept of INNOVAS was realised. For the new production branch the former laitance drying plant was modified.

Additionally to the interesterification plant an own oil-mill was installed, to produce cold-pressed rape oil in best quality by itself.

The big advantage for the investors was that many apparatus and devices could be re-used or refit for the bio-diesel production. This investment advantage has a direct influence to the specific interesterification costs and lead to a competitive production of this plant compared to other big plants.

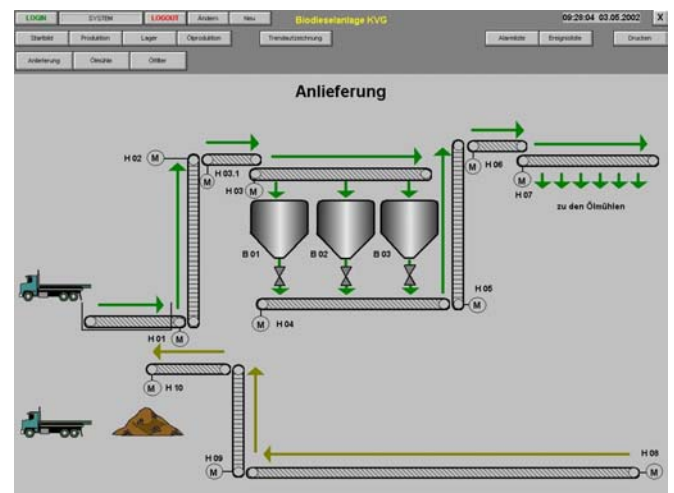


### Plant KVG Kartoffelverwertung Schleswig

The raw rape oil is mixed with methanol and caustic potash solution as catalyst. The raw bio-diesel is then separated from its by-product glycerine in a phase separation vessel. In the second process step the raw bio-diesel is washed further, dried and refined, so that the environmental friendly fuel has the required quality according to DIN 51 606 or EN and it can be used for cars and lorries.

Additives to guarantee the coldness capability to -20 °C are added for the winter operation.

The several process steps are visualised in the control plant. So the plant leader can recognize immediately the operation state of his plant.



The entire production, from the delivery of material until the storage of the bio-diesel into the delivery storage is supervised. Before the delivery every production charge is sampled and send to a testing laboratory accredit by AGQM for the release. This ensures that only standard bio-diesel is put to the traffic.

### Technical data

Used oil sorts:	cold-pressed rape oil
Production capacity:	10.000 t/a, in two-shift operation
Spec. interesterification costs:	ca. 0,08 - 0,10 €/l



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